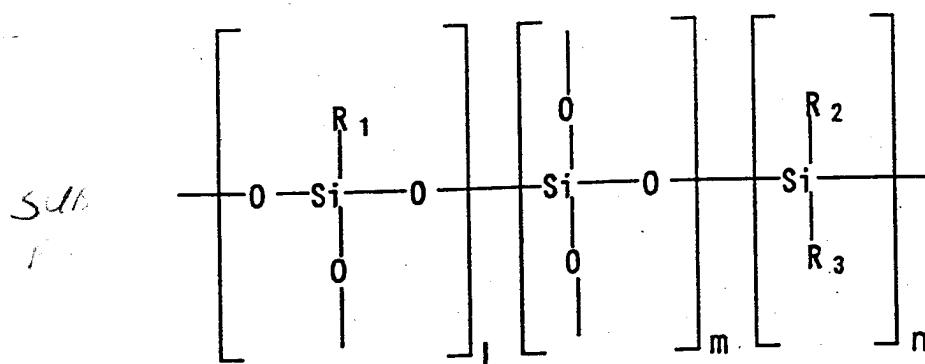


4. (Amended) The sensor element according to claim 1, wherein the resin film is a cured polymer film selected from the group consisting of silicone polymers, polyimide polymers, polyimide silicone polymers, polyarylene ether polymers, bisbenzocyclobutene polymers, polyquinoline, perfluorohydrocarbon, fluorocarbon polymers, and aromatic hydrocarbon polymers.

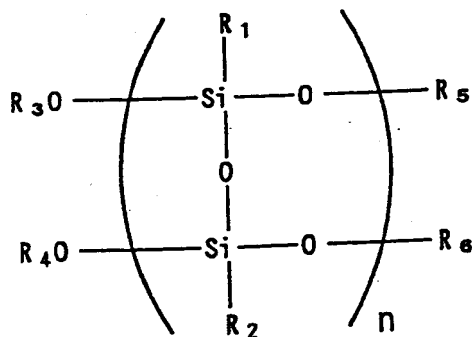
5. (Amended) The sensor element according to claim 4, wherein the polymer is a photo-curing polymer.

6. (Amended) The sensor element according to claim 1, wherein the cured polymer film is a silicone polymer represented by the general formula (1)



wherein R_1 , R_2 , and R_3 may be the same or different, are selected from the group consisting of an aryl group, a hydrogen atom, an aliphatic alkyl group, a hydroxyl group, a trialkylsilyl group, and a functional group having an unsaturated bond, l , m , and n are integers and at least 0, and the silicone polymer has a weight-average molecular weight of not less than 1,000.

7. (Amended) The sensor element according to claim 1, wherein the resin film is a cured film of a silicone polymer represented by the general formula



wherein R_1 and R_2 may be same or different, and are selected from the group consisting of an aryl group, a hydrogen atom, an aliphatic alkyl group, and a functional group having an unsaturated bond, R_3 , R_4 , R_5 , and R_6 may be same or different, and are selected from the group consisting of a hydrogen atom, an aryl group, an aliphatic alkyl group, a trialkylsilyl group, and a functional group having an unsaturated bond, and n is an integer, and the silicone polymer has a weight-average molecular weight of not less than 1,000.

8. (Amended) The sensor element according to claim 4, wherein the resin film comprises plural layers and each of the layers comprises a cured polymer film of a different cured polymer.

9. (Amended) The sensor element according to claim 8, wherein each of the layers comprises a cured polymer having different molecular weight.

10. (Amended) The sensor element according to claim 9, wherein the layers include a layer of a cured polymer film comprising a silicone polymer having a weight-average molecular weight of not less than 100,000 and a layer of a cured polymer film comprising a silicone polymer having a weight-average molecular weight of not more than 100,000.

11. (Amended) The sensor element according to claim 8, wherein an uppermost layer of the layers comprises a cured polymer film of a photo-curing polymer.

12. (Amended) The sensor element according to claim 1, wherein the sensor element is selected from the group consisting of a magnetoresistance sensor, an air flow sensor, an acceleration sensor, a pressure sensor, a yaw rate sensor, and an image sensor.